

ITIS Plays Key Role in Global Effort to Document All Named Species

On May 9, 2007, many of the world's leading scientific institutions announced the launch of the Encyclopedia of Life (EOL), an unprecedented undertaking to provide multimedia access to the planet's 1.8 million named species of animals, plants, and other forms of life. Through the EOL, scientists, students, and the curious can explore a wealth of information on each species through a single Web portal.

The first installment of EOL Web pages was released on February 26, 2008, and covers some 30,000 species.

The National Biological Information Infrastructure (NBII) <www.nbii.gov> is pleased to contribute to this and future EOL milestones through the Integrated

Taxonomic Information System (ITIS) <www.itis.gov>, a crucial NBII component.

How does ITIS figure in this vast, collaborative enterprise?

EOL is building a Web page for each species. With all the names given to the world's species, including synonyms and common names, EOL needs an authority it can turn to with confidence that identifies each species' currently accepted name.

ITIS, based at the Smithsonian's National Museum of Natural History, and its partner, Species 2000, at the University of Reading in the UK, are jointly producing the Catalogue of

(Continued on page 5)



Do You Know Who Pollinates Your Flowers?

If you saw a bee buzzing around a flower, could you tell whether it was a honeybee, one of the 48 species of bumblebees in North America, or one of the 4,000 non-bumblebee species?

A scientist might refer to Charles Duncan Michener's 952-page magnum opus, *The Bees of the World* (2000). But for the average naturalist, there are few field guides to bee identification. This is unfortunate, since one third or more of our crops and flowering plants require the pollination services of our native bees. A 2006 report on the Status of Pollinators in North America by the National Academy of Sciences concluded that declines are evident in both our wild and honeybee populations and that more bee

population monitoring data are needed.

But monitoring and identifying bees is challenging because they are small, difficult to mark, and often too quick for the eye to follow. Monitoring techniques and identification tools are not well developed, stifling bee research and conservation, as well as citizen scientist participation. However, a collaborative project to develop online bee identification guides and monitoring techniques is working to solve this problem.

Led by Sam Droege with the U.S. Geological Survey (USGS), scientists and taxonomists from the U.S. Department of Agriculture Native Bee Lab, the American Museum of

(Continued on page 2)

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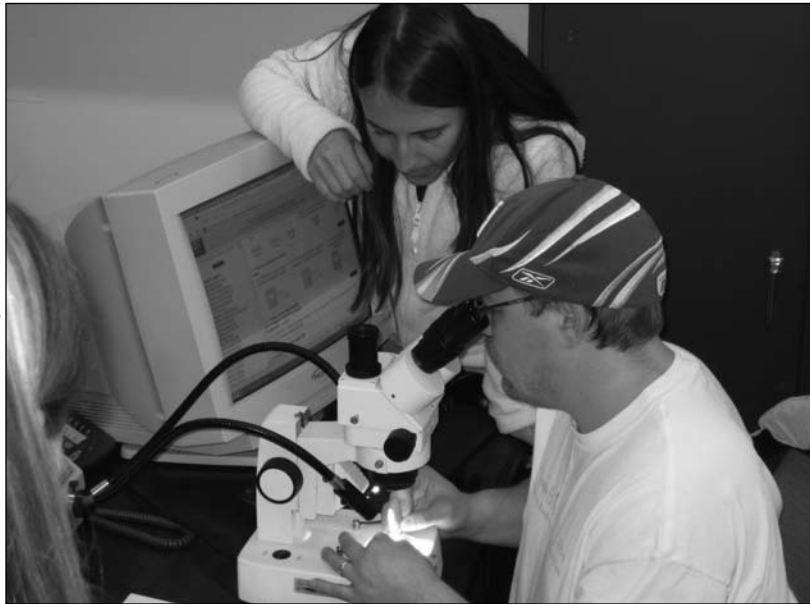
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Natural History, many individual entomologists, the University of Georgia-Athens, and the Discover Life project are creating a bee sampling protocol and online identification guides for the bees of North America based on specimens collected in the field, as well as Michener's *Bees of the World*. These guides are now the standard for taxonomic names and identification in eastern North America. Further USGS work has resulted in practical sampling techniques and in 2008, large-scale tests of survey techniques are planned.

Online bee identification guides have been created for eastern North America (east of the Mississippi River), covering nearly 800 bee species from 65 genera. The

geographic coverage of the guides is being expanded to include genera and species from the central and western United States, Mexico, and Canada.



Rob Jean and Maria Van Dyke explore native bee identification in the Native Bee Laboratory at the USGS Patuxent Wildlife Research Center in Laurel, MD.


Most of the guides, accessible online at <http://www.discoverlife.org/20/q?search=Apoidea>, feature a single genus of bees. If there are a large number of bee species in a single genus, the guides are divided by sex,

as characters useful for identifying species are often gender specific.

Each guide contains questions, candidate species, and navigation tools. The guides are polychotomous; that is, they allow the user to enter at any point and answer questions to shorten the list of candidate species. In contrast, identification guides are traditionally dichotomous, requiring users to answer the first question before moving on. Because the bee guides don't require you to answer all the questions, or answer them in a particular order, bee specimens can usually be identified even if they are missing parts, such as their head or a leg or two.

The guides contain photographs to help identify bee body parts, and users can click on hyperlinked species names for additional information. The Discover Life Web site also provides instructions for using the guides, techniques for collecting and preparing bee specimens, a glossary of bee identification terms, and access to a bee monitoring discussion group hosted by the USGS.

Droege and his collaborators also hold quarterly identification workshops for bee researchers throughout the United States. The classes are very popular and fill up quickly. For more information about the workshops, contact Sam Droege at sdroege@usgs.gov.

This project is funded by the Ambrose Monell Foundation, the NBII, and the U.S. National Fish and Wildlife Foundation. In-kind support is provided by The Polistes Foundation, the North American Pollinator Protection Campaign, and bee taxonomists throughout North America. 

Access

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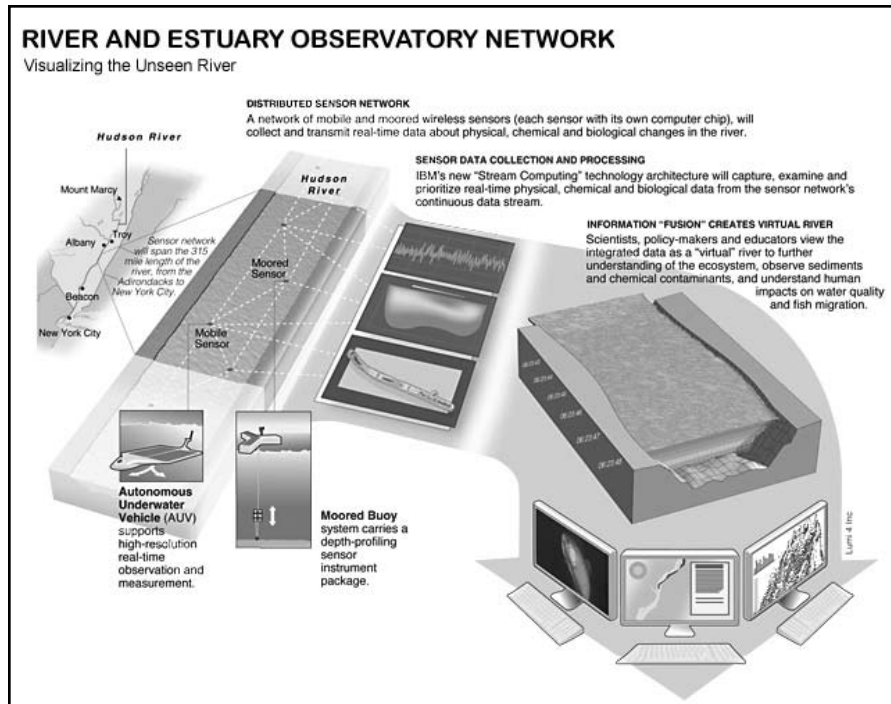
Visit the NBII Home Page at www.nbio.gov.

New Partnership Between The Beacon Institute and NBII Node to Foster Enhanced Exploration of Hudson River Watershed

A new Web-based data portal and mapping tool aims to enhance exploration of the physical and cultural geography of the Hudson River Watershed, including real-time depictions of the ongoing processes of river life. It is being developed as part of a new partnership between the Northeast Information Node (NIN) of the NBII and The Beacon Institute, a non-profit global center for scientific and technological innovation to advance research, education, and public policy regarding rivers and estuaries. The portal will also enable users to view and download a variety of environmental monitoring data, and create customized maps. Educators in the institute's Mastering the Hudson program will use the tool to discover significant features and events within the Hudson River Watershed and grasp the spatial relationships that drive its ecological and social processes. It will also serve as a central archive for preserving data collections on the Hudson River Watershed and will increase collaboration among researchers.

Beyond the typical data layers found in most mapping tools, the mapping tool will contain numerous other layers such as USGS real-time stream-gauging stations, the SPARROW model data illustrating nitrogen and phosphorus estimates for stream reaches, and a variety of socioeconomic and demographic community profiles within the watershed. Data layers from other NIN partners, such as the distribution of invasive species from the Invasive Plant Atlas of New England (IPANE) and data from Gateway National Park, will also be incorporated.

Of particular interest will be the delivery of data generated by The Beacon Institute's recent environmental monitoring collaboration with IBM. The project, entitled REON (the River and Estuary Observation Network), involves a network of real-time sensors and technology reporting data on fish




An overview of the components and architecture of the REON system

migration, the movement of pollutants, and the effects of physical alterations to the river, including the effect of global warming on water levels and habitat in tidal estuaries. John Cronin, Director of the Institute, says he envisions "an information system that translates and broadcasts the data to researcher and student alike." Imagine sitting at your home computer, entering longitude, latitude, and depth of water into a Web site and being able to watch a depiction of the processes within the river nearby, happening at that moment. The NBII and NIN are proud to become part of the team making this vision a reality.

The mapping tool's compliance with current and evolving interoperability mapping standards will enable the easy inclusion of new data layers supplied by other data providers following the same protocols. It will be able to search for and integrate geospatial data layers following the Open Geospatial Consortium (OGC) standards, such as Fish and Wildlife Service data layers depicting their regional boundaries or U.S. Army

Corps of Engineers layers depicting their regulatory districts. The rapidly expanding list of agencies providing these real-time or near real-time data services promises to make this mapper an extremely powerful way to explore the Hudson River Watershed.

Hosted at the Center for International Earth Science Information Network of Columbia University (CIESIN), NIN is pioneering ways to bring funded partnerships into the NBII to extend our reach and capabilities, promote an economically sustainable structure for the NBII, and better fulfill our mission. This new partnership with The Beacon Institute is one example of how the NBII can work with public and private organizations to foster projects that define how we store, visualize, share, and manage critically important environmental data and information.

For more information, please visit NIN at <<http://nin.nbii.gov>>, The Beacon Institute at <<http://thebeaconinstitute.org>>, and CIESIN at <<http://ciesin.columbia.edu>>. 

New Wetlands Guide Published for the Pacific Northwest

Wetland habitats play an important role in the Pacific Northwest. The publication, *A Guide to Oregon and Washington Wetland Wildlife and Their Habitats*, recently released by the Northwest Habitat Institute in collaboration with the NBII Pacific Northwest Information

“Currently, teachers in our district have to use supplementary resources to adopt curriculum to provide information about ecosystems specific to Oregon and Washington; this guide is a much appreciated resource.”
— Oregon Science Teacher

Node and many other partners, helps educate students about these unique areas.

Often only general resources about ecosystems and biological topics exist, but this book provides specific, relevant information for this region. The 75-page guide provides detailed information about wetland ecology, habitats, and wildlife in Oregon and Washington for educators of middle- and high-school students. The guide raises awareness about



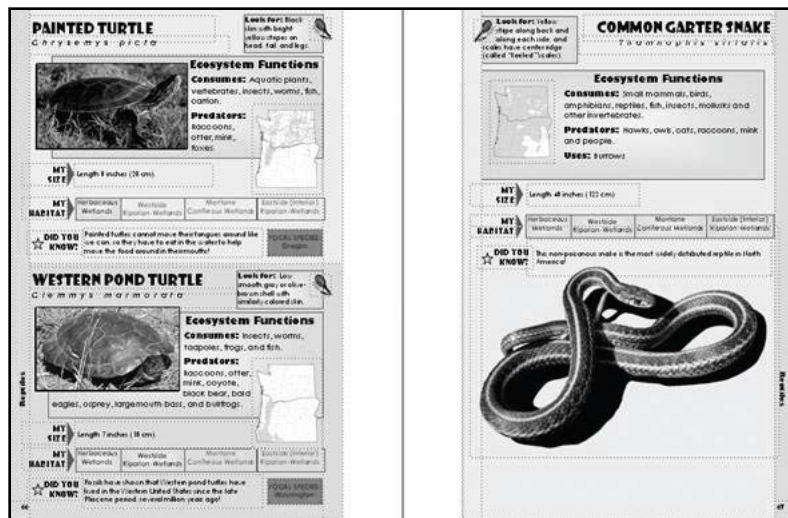
wetlands for students who might not otherwise be introduced to the topic. The guide will be distributed to 15,000

schools across Oregon and Washington. As of December 2007, more than 11,000 copies have been circulated.

The NBII's Pacific Northwest Information Node

provided support for the primary data used in this resource, which comes from the Northwest Habitat Institute's Interactive Habitat and Biodiversity Information System (IBIS). IBIS contains extensive data and information about Pacific Northwest fish, wildlife, and their habitats, and illustrates the relationships among them.

The guide provides geographic visualizations of species ranges, as



The Reptiles section of the guide provides information on how to identify species as well as their unique functions in the ecosystem.

well as a concise synopsis of the detailed peer-reviewed data and information from the IBIS system. Coupled with stunning photographs, images, and graphic design elements, the result is a unique, easy-to-read, and informative guide about wetlands in the Pacific Northwest.

For more information, go to <http://pnwin.nbii.gov> or <http://www.nwhi.org>.

Support for the guide was provided by the following sponsors:

- Northwest Habitat Institute,
- The Fred Meyer Foundation,
- Oregon Fish and Wildlife,
- Washington Department of Fish and Wildlife,
- Oregon Chapter of The Wildlife Society,
- Washington Chapter of The Wildlife Society,
- Pacific Education Institute,
- Conservation Management Institute,
- USGS National Biological Information Infrastructure, and
- Bonneville Power Administration.

Life, a consensus taxonomy derived from more than 50 taxonomic databases of the world's species. ITIS is the largest of those databases. The Catalogue of Life serves as the index of names for EOL's species pages.

"But the Catalogue is more than a list of names," says Dr. Michael Ruggiero, ITIS Senior Science

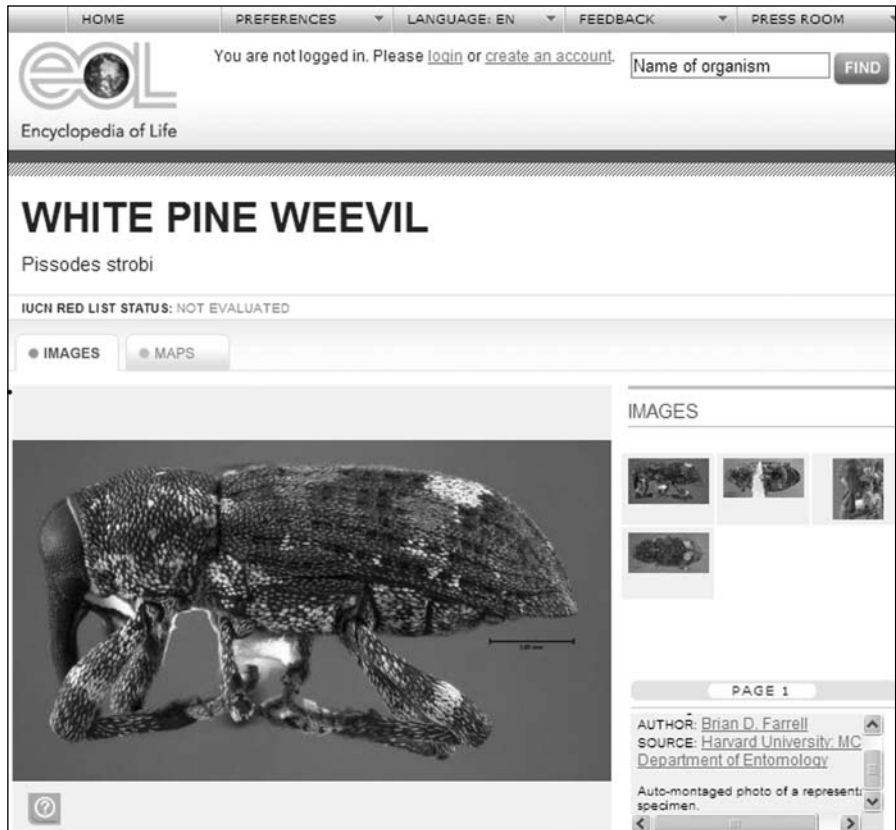
The Catalogue of Life serves as the index of names for EOL's species pages.

Advisor. "We place those names within a taxonomic classification so you can see the relationship between an accepted species name, its synonyms, and every other living thing." That structure serves as the organizing framework for the EOL species pages.

To the species name, EOL adds geographic information from the Global Biodiversity Information Facility <www.gbif.org> along with a wide range of other information about each species — what it looks like, how you can identify it, and so forth — in one place and in one format. What's more, not only are the species names standardized, but so are the pages themselves. Once you can navigate one page, you can navigate them all.

EOL visitors, including *Access* readers, are invited to peruse and critique the new pages, housed at <www.eol.org>. Visitors will note the wide range of information offered on each species, including text and, when available, photographs, video, sound, location maps, and other multimedia offerings.

Visitors will also see that the first group of pages is a pilot project. "We want folks to examine these



The white pine weevil (Pissodes strobi) is just one of the approximately 30,000 species covered in the first installment of EOL Web pages released on February 26, 2008.

Web pages and give us feedback," says Dr. James L. Edwards, EOL Executive Director, who is based at the Smithsonian's National Museum of Natural History in Washington, DC. "We want to know what they like — and dislike. We've streamlined this process by providing an online questionnaire."

Clearly, the EOL is a noble, emerging effort that will depend on established programs like ITIS.

Edwards says that EOL expects to release another large group of pages later in 2008. In that same time frame, he says EOL visitors should be able to submit their own information

(photos and text) for EOL staff and partners to consider for inclusion in current and future species pages.

Looking longer term, Edwards expects the EOL will create Web pages over the next 10 years for all 1.8 million species currently named — and will also expedite the classification of the millions of species yet to be discovered and catalogued.

"The EOL will serve as a global biodiversity tool, providing scientists, policymakers, students, and citizens the information they need to discover and protect the planet and encourage learning and conservation," says Edwards. Clearly, the EOL is a noble, emerging effort that will depend on established programs like ITIS. Working together, they can have astounding benefits for current and future generations. 🌱

NBII Represented at AFWA Annual Meeting

NBII representatives attended the Association of Fish and Wildlife Agencies (AFWA) 2007 Annual Meeting in Louisville, KY, held September 16–21. Over 600 attendees from across the nation assembled at the conference to discuss climate change and its impact on fish and wildlife as part of the conference's theme, "The Changing Climate of Wildlife Management."

Terri Killeffer from the Southern Appalachian Information Node (SAIN), Tanner Jessel from SAIN, Bernadette Guerra from the National Program Office in Reston, and Christine Marsh from the Wildlife Disease Information Node (WDIN) spoke to attendees about NBII activities and publications. AFWA conference visitors came by the NBII booth and picked up copies of node fact sheets and

the NBII *Access* newsletter, signed up for the WDIN Wildlife Disease Node News Digest, and interacted with NBII Web sites via two computers on display.

NBII representatives also attended several of the conference's committee meetings. At the Teaming with Wildlife meeting, Terri Killeffer met Thomas Eason,

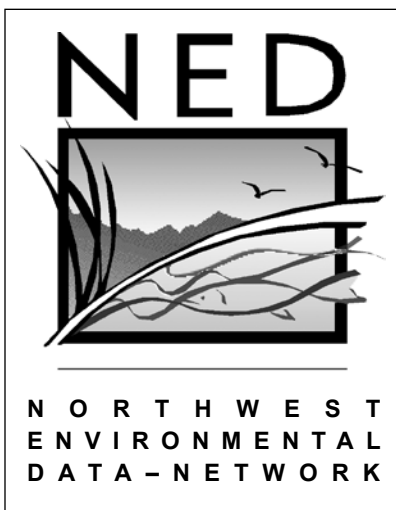
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Conservation Initiatives Coordinator, from the Florida Fish and Wildlife Conservation Committee, who invited SAIN to the upcoming Southeast Comprehensive Wildlife Conservation Strategy (CWCS) committee meeting in Florida. As a result, Jean Freeney and Terri Killeffer attended the event and provided the Southeast CWCS with an overview of NBII and SAIN. Several opportunities were identified, including the potential for SAIN to create a collaboration space within the My.NBII.Gov portal, <<http://my.nbii.gov>>, for the committee's collaboration needs. 🌿



Christine Marsh (left) from WDIN and Bernadette Guerra (right) from the NBII National Program Office in Reston answered questions and distributed publications at the NBII exhibit booth at AFWA. They were surrounded by computers set up to give visitors live demonstrations of the NBII Web site.

NBII Helps With Environmental Data Management in the Pacific Northwest



The Executive Summit held on October 1, 2007, brought together leaders from many federal, state, and tribal governments, and other organizations to identify next steps for environmental data management in the Pacific Northwest to improve efficiencies, reduce duplication of effort, and help the decision-making process for complex natural resource issues.

The NBII Pacific Northwest Information Node and Metadata Program are working with the Northwest Environmental Data

Network, a regional data management group, to develop a prototype that demonstrates the value of organizing data, metadata, and other information in a way to improve decision-making processes. The pilot will bring together data, metadata, technology, and other information from the NBII, Bonneville Power Administration, Northwest Power and Conservation Council, Columbia Basin Fish and Wildlife Authority, NOAA Fisheries, and many other partners, and will be released in June 2008. 🌿

OFWIM: Discover the Benefits!



NBII at OFWIM: (L to R) Viv Hutchison, Lisa Zolly, Julie Prior-Magee, Jean Freeney, Mike Frame, and Jen Pollock.

The Organization of Fish and Wildlife Information Managers (OFWIM) held its annual meeting September 17–20, 2007, at the National Conservation Training Center (NCTC) in Shepherdstown, WV. The theme was “Common Problems, Common Solutions: Advancing Natural Resource Management Goals Through Collaboration and Technology.” Over 60 people participated in the three-day event, including representatives from 18 federal agencies, 26 state agencies, 5 non-governmental organizations, and 6 universities. Participation from the NBII was strong: 11 from the NBII National Program Office and 3 from the NBII nodes.

There were many interesting presentations, with titles such as “Applications of SWReGAP Data: Perspectives from State Wildlife Agencies,” “NBII Current Computer, Geospatial, and Information Science Efforts,” “Chinook Salmon in California: the AutoFish System™,” “Biota Information System of New

Mexico (BISON-M),” “Leveraging National GAP Data Sets for Vertebrate Modeling,” “Development of Consolidated Database Systems in the Idaho Fish and Wildlife Information System,” and “The FGDC 50 States Initiative.”

In addition, workshops were offered on topics including “GAP Analysis: Demonstrating Web Accessibility to GAP Data,” “GPS Device Selection,” and “Experiments with Google Earth and Google Maps.” These topics were of such interest that the OFWIM Continuing Education and Training Committee will be offering further seminars via webex throughout the year.

Several popular field trips were offered, including tours of the Antietam National Battlefield and Harpers Ferry, and a hike on the Appalachian Trail with National Park Service guides.

The NBII has contributed to OFWIM’s leadership in the last few years: Viv Hutchison served as

(Continued on page 8)

OFWIM Quick Facts:

What is OFWIM?

The Organization of Fish and Wildlife Information Managers (OFWIM) is a non-profit organization that promotes the management and conservation of natural resources by facilitating technology and information exchange among fish and wildlife information managers. OFWIM was formally established in 1993 and was granted non-profit status in 1995.

How does OFWIM achieve its goals?

To achieve its mission, OFWIM emphasizes coordination and outreach, technical assistance, and continuing education. Objectives within each of these focus areas are met through the production of an information newsletter (published three times each year), sponsorship of an annual national meeting, member participation on committees throughout the year, sponsorship of and participation in training sessions, and the maintenance of the OFWIM-L listserv.

Who can become a member of OFWIM?

OFWIM consists of working professionals representing a broad assortment of state fish and wildlife agencies, federal agencies, non-profits, and universities. These data managers, scientists, GIS experts, wildlife conservation experts, land managers, and others are involved in many components of natural resource management.

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OFWIM (continued from page 7)

president in 2006-7 and Shelaine Hetrick has served as the chair of the Communications Committee for two years. Lisa Zolly is the current secretary for the organization, and many others are involved in committees that help keep OFWIM viable throughout the year.

There are always advantages to participating in a smaller professional organization. OFWIM offers a chance for significant networking opportunities at the conference, and those who have attended the conference over the years have created interesting partnership developments for the NBII.

The 2008 conference will be



OFWIM Executive Committee: (front row - L to R) Viv Hutchison (USGS), Janet Hess Herbert (Montana Fish, Wildlife, and Parks), Sabra Schwartz (Arizona Department of Game and Fish), and Beth Stys (Florida Fish and Wildlife Conservation Commission); (back row) Aliya Ercelawn (The Nature Conservancy), Robin Carlson (Pacific States Marine Fisheries Commission).

October 27–30 in Albuquerque, NM. The organization always welcomes new members and encourages conference participation. Please visit

<http://www.ofwim.org> for more information about how to get involved! 🌿



View from the Appalachian Trail at Weverton Cliffs.

OFWIM Quick Facts (continued from page 7)

How does someone become a member?

Individual memberships are \$25 per year. Organizational memberships (six members) are \$100 per year. Members are entitled to vote in the annual election and hold office, and are highly encouraged to participate. Current members are sent newsletters and receive a discount on conference registration. To join, and for more information, please visit the Web site at <http://www.ofwim.org>.

Invasive Species Toolbox

Do you have news about an invasive species project you would like to share through this column? The Toolbox is a collection of useful items and highlights related to invasive species information management issues. Please send any ideas or suggestions you might have for Toolbox columns to <asimpson@usgs.gov> or <esellers@usgs.gov>.

USFWS Provides Online Invasive Species Combat Training

Since 2003, the U.S. Fish and Wildlife Service (USFWS) National Wildlife Refuge System, along with The Nature Conservancy, the National Wildlife Refuge Association, and the U.S. Geological Survey, have jointly trained volunteers to use hand-held GPS devices to map invasive species on national wildlife refuges. Invasive species are one of the single greatest threats to the Refuge System, yet an



Kudzu is an invasive plant commonly seen along roadsides in the southeastern United States.

estimated 1.72 million acres remain untreated. Now, in collaboration with the Center for Invasive Plant Management, the National Wildlife Refuge System has designed an online training course for volunteers interested in fighting invasive species. The new Web site, <<http://www.fws.gov/invasives/volunteersTrainingModule>>, includes video, text, and photos that

provide background on the Refuge System and information about the science and management of invasive plants. The learning modules offer a variety of information to help people better understand invasive plants and assist in their management. Users can also see how volunteers are participating in invasive plant projects throughout the Refuge System. "Volunteers can be our greatest advocates in the fight against this major nationwide threat to wildlife and habitat," said Jenny Ericson, national invasives volunteer coordinator for the Refuge System.

Princeton Project Maps Invasive Plant Distributions in the Southeast

Princeton University's Regional Invasive Plant Mapping Project is seeking anyone with knowledge of

the local abundance of kudzu (*Pueraria montana*), cogongrass (*Imperata cylindrica*), and Chinese/European privet (*Ligustrum sinense* / *L. vulgare*) in the southeastern United States to help develop regional distribution maps.

The goal of the project is to develop the first comprehensive, high-resolution maps of these invasive plants across 11 southeastern states. The project will produce a distributional data set at a spatial resolution between the county and point infestation levels, which is appropriate for assessing regional abundance and projecting invasion risk. Once the maps are developed, southeastern weed managers will be able to determine hot spots of invasion, coordinate management

across the region, and attract funding for containment and restoration programs. On the project Web site, contributors submit data through an easy-to-use mapping application

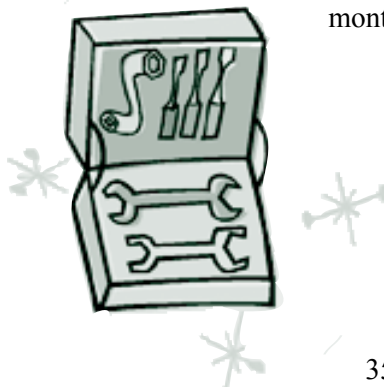
based on the Google Maps platform. In the first six months, the project successfully mapped over 30 percent of the southeastern United States using data submitted by more than 350 invasive

plant managers and professionals. For more information, please contact Dave Marvin <dmarvin@princeton.edu> or visit the project Web site at <<http://invasive.princeton.edu>>.

New I3N Tools for the Prevention of Biological Invasions in the Americas

Three new online tools to combat plant invasions in the Americas have been developed by the Inter-American Biodiversity Information Network's Invasives Information Network (I3N), and beta versions are now available in Spanish at <<http://i3n.iabin.net>>.

The tools include a priority setting risk-assessment tool, a pathways and vector analysis tool (both within an Excel spreadsheet), and a presentation describing the tools and their importance to the prevention of invasive species. In addition, there is a downloadable manual describing how to use the tools, which were developed by I3N Tool Representatives, Dr. Sergio Zalba and Dr. Silvia Ziller. The tools and manual will soon be translated into English. Bilingual readers are encouraged to try out these tools and provide feedback at <i3n@usgs.gov>.



NBII in the News

- The Winter 2008 issue of *CMI Bulletin*, the newsletter of the Conservation Management Institute (CMI), an NBII partner, has an article on page 7 about CMI's partnership with the Mid-Atlantic Information Node, as well as the node's offerings. For more information, see <http://www.cmiweb.org/Newsletter/Winter_2008.pdf>.
- The NBII Northeast Information Node (NIN) is cited in an article titled "Jamaica Bay to host science event" in the September 6, 2007, edition of the *TimesLedger.com* <http://www.timesledger.com/site/news.cfm?newsid=18790477&BRD=2676&PAG=461&dept_id=551068&rft=6>. The article describes the first ever "BioBlitz" competition – held last September 7-8, 2007 – in which science experts led teams of volunteers for a 24-hour period to find as many exotic organisms living within the bay as they could. NIN's Jamaica Bay Research and Management Information Network (JBRMIN) was chosen as the vehicle for conducting registration for the event, which drew double the number of expected participants as well as attracting coverage by the *Times Ledger* and other media outlets.
- The December 2007 edition (Volume 17, Number 9) of the *Alliance for the Chesapeake Bay - Bay Journal* includes one of John J. Mosesso's photos of a bullfrog in an article on pages 5 and 6. The article is titled, "Stony Run makeover music to the ears of stream's restorers: Frogwatch USA volunteers monitoring amphibians in area water bodies." The image is on page 6 of the printed publication. Mosesso and the NBII are cited in the image caption. The image is one of thousands available through the NBII Digital Image Library <images.nbii.gov>. You can see the article online, along with the image in question (lower image on the right hand side of the screen), at <<http://www.bayjournal.com/article.cfm?article=3214>>.
- The USGS National Aquatic



Photo credit: John Mosesso

This photo of a bullfrog taken by John J. Mosesso appeared in the article on the Stony Run stream in the *Alliance for the Chesapeake Bay - Bay Journal* and is also available through the NBII Digital Image Library.

Gap Analysis Program (GAP) was highlighted in the August 2007 issue of *Ecological Monographs*, a publication of the Ecological Society of America (Sowa, S., G. Annis, M. Morey, and D. Diamond. "A GAP Analysis and Comprehensive Conservation Strategy for Riverine Ecosystems of Missouri." *Ecological Monographs* 77, no. 3 [2007]:301–34). The monograph covers the methods and results of the Missouri Aquatic GAP Project, which assessed how well the variety of riverine ecosystems, habitats, and species are represented within existing conservation lands of the state. The paper also provides a detailed description of how Aquatic GAP data were used to select Conservation Opportunity Areas for the Missouri Wildlife Action Plan. These areas are being used as a core component to identify priority riverscapes for the conservation of freshwater biodiversity in Missouri. The monograph can be found online at <http://www.gap.uidaho.edu/projects/aquatic/sowa_etal_2007_ecomonographs.pdf>. GAP is an important part of the NBII, a collaborative program to provide increased access to data and information on the nation's biological resources.

- In the December 2007 issue of *Discover Magazine*, the editors cited the Census of Marine Life as one of the six most important experiments in the world. The Census was chosen based on its potential to better protect the world's ocean resources, and through its discoveries, for the promise of developing new pharmaceuticals and industrial applications. The NBII Marine Theme <<http://www.nbii.gov/portal/community/Communities/Habitats/Marine>> and USA-OBIS are part of the Census. You can find the online version of the magazine at <<http://discovermagazine.com/2007/dec/the-6-most-important-experiments-in-the-world>>.
- The NBII is mentioned in an article appearing in the January 13, 2008, edition of *Science Centric* titled "Annual bald eagle survey yields important results" <<http://www.sciencecentric.com/news/08011318.htm>>. *Science Centric* is an international news portal, specializing in delivering breaking news about the latest discoveries in the field of natural sciences. The main topics covered include physics, chemistry, geology and paleontology, biology, environment, astronomy, and health. 🌿

International Connections

IABIN Mid-Term Review Meeting

An integral part of the development of the Inter-American Biodiversity Information Network (IABIN) is its mid-term review, which was held in Panama January 29–31, 2008. IABIN is implementing a five-year \$6 million Global Environment Facility grant from the World Bank, which is scheduled to end by 2010. Progress reports were presented by the coordinating institutions of the five thematic networks: invasive species, pollinators, species and specimens, protected areas, and ecosystems.

The IABIN Executive Committee, chaired by Gladys Cotter (Director of the National Biological Information Infrastructure [NBII]), also discussed options for Internet hosting of the main Web site, advances in the IABIN catalog search engine (presented by the NBII's Mike Frame), and ideas for the long-term sustainability of the network. Considerable progress was made on administrative issues and utilization options for the development of decision-support tools, while keeping in mind long-term sustainability and continuing to build quality biodiversity information content throughout the network.

IABIN Pollinators Thematic Network Reports Progress at Mid-Term Review Meeting

Mike Ruggiero, Science Advisor for the Integrated Taxonomic Information System and co-lead of the IABIN Pollinators Thematic Network (PTN) consortium, presented a progress report at the IABIN Mid-Term Review Meeting in Panama. The PTN has developed a prototype online pollinator data portal and an experts database. These tools will provide users with access to important pollinator species and specimen records, pollinator-plant association data, expertise, and references via the Internet.

The PTN team has also been working with the Centro de Referência

em Informação Ambiental (Reference Center on Environmental Information in Brazil), GBIF (Global Biodiversity Information Facility), and the Food and Agriculture Organization to develop three Darwin Core Extension Schemas that will standardize digital pollinator data. For organizations whose pollinator data may not be in digital format, the PTN is also developing a tool that allows users to generate

Observations (GEO) group of the Global Earth Observation System of Systems (GEOSS) hosted a workshop to “Create and Improve Protected Area Polygons in the Western Hemisphere using the USGS Global Data Toolset” in Paraguay, November 10–17, 2007.

This workshop provided an opportunity for protected area specialists from seven South American countries (Paraguay, Brazil, Colombia,



I3N Interim Coordinator Annie Simpson of the NBII presents new Risk Assessment and Pathway Analysis Tools to the IABIN Executive Committee.

a standards-compliant database of pollinator specimen records. To date, three grants have been awarded to organizations in the Americas to use these tools to digitize and standardize their pollinator data and serve them through the PTN Data Portal.

International organizations had the opportunity to learn more about the PTN and its products through a presentation and poster at the thirteenth meeting of the Subsidiary Body on Scientific, Technical, and Technological Advice to the Convention on Biological Diversity in Rome, Italy, February 18–22, 2008.

USGS Workshop on Protected Areas

The U.S. Geological Survey (USGS) Biological Informatics Office, IABIN, and the U.S. Global Earth

Ecuador, Chile, Argentina, and Uruguay) to be trained in the use of the USGS Global Data Toolkit developed by the Rocky Mountain Geographic Science Center. Country representatives were able to review and revise their official protected areas data by comparing them to similar data from Conservation International and The Nature Conservancy, as well as supplemental data from the USGS, particularly Landsat imagery. The World Conservation Monitoring Centre discussed their programs and resources for improving data in the World Protected Area Dataset at the workshop, while IABIN Protected Areas Thematic Network (PATN) representatives ensured that workshop activities were within the planning guidelines for achieving their long-term goals. 🌿

Photo credit: Elizabeth Sellers

Upcoming Events of NBII Interest

Green Development: Good for Water and the Bottom Line, Nashville, TN.	February 24–26	2008 Meeting of the Association of Southeastern Biologists, Spartanburg, SC.	April 16–19
2008 Ocean Sciences Meeting: From the Watershed to the Global Ocean, Orlando, FL.	March 2–7	2008 Joint Meeting of the Wilson Ornithological Society and the Association of Field Ornithologists, Mobile, AL.	April 17–20
Floodplain Ecosystem Symposium, Little Rock, AR.	March 4–6	Partners in Evolution: Interactions, Adaptations, and Speciation, Washington, DC.	April 26
Conference on the Ecological Dimensions of Biofuels, Washington, DC.	March 10	2008 Aquatic Weed Control Short Course, Coral Springs, FL.	May 5–8
Native Bee Identification, Ecology, Research and Monitoring, Shepherdstown, WV.	March 24–28	American Institute of Biological Sciences 2008 Annual Meeting, Washington, DC.	May 13–15
73rd North American Wildlife and Natural Resources Conference, Phoenix, AZ.	March 25–29	Southeast Exotic Pest Plant Council 10th Annual Symposium, Biloxi, MS.	May 20–22
Solutions to Coastal Disasters 2008, Oahu, HI.	April 13–16	National Conference on Urban Ecosystems, Orlando, FL.	May 28–30



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